ABSTRACT OF THE DISCLOSURE

In an exhaust system of an internal combustion engine, an air-fuel ratio sensor is located upstream of a three-way catalyst. An oxygen sensor is located downstream of the catalyst. An ECU performs feedback control of the amount of fuel based on output of the air-fuel ratio sensor such that the engine air-fuel ratio seeks a stoichiometric air-fuel ratio. The ECU also performs sub-feedback control for correcting the amount of fuel in the feed back control based on output of the oxygen sensor. The ECU learns a learning value for compensating for a stationary difference between the engine air-fuel ratio and the stoichiometric air-fuel ratio based on a sub-feedback correction value. When learning of the learning value is performed after the learning value is cleared, a slip control by a lockup clutch is inhibited until the learning is stabilized.